

## **CLAIM AMENDMENT**

Please amend the claims as follows:

1. (currently amended) A fuel injector having field replaceable components exchangeable to change at least one of said fuel injector's characteristics, said fuel injector comprising:

an electrical power connector adapted to receive a fuel injector energization signal;

an electrical actuating coil electrically coupled to said electrical power connector and

5 powered by said fuel injector energization signal to controllably produce a magnetic field;

a ferromagnetically responsive needle movable responsive to variations in said magnetic field;

a valve seat having a fuel passage therethrough, said fuel passage selectively closed  
10 or opened by said movement of said ferromagnetically responsive needle;

a fuel inlet for receiving fuel into said fuel passage;

a flow disk receiving fuel from said fuel passage and dispersing said fuel within an internal combustion engine; and

a housing enclosing said electrical actuating coil, said ferromagnetically responsive  
15 needle, said valve seat, and said flow disk, said housing having a fuel inlet and a fuel outlet and further having a field removable and replaceable closure which provides field access to and replacement of said field replaceable components and thereby change at least one of said fuel injector's

characteristics;

20 each of said field replaceable components further comprising indicia which uniquely  
allow visual identification of a particular performance characteristic attained  
when said field replaceable components are incorporated into said fuel  
injector.

2. (canceled)

3. (original) The fuel injector having field replaceable components of claim 1, further comprising:

a spring calibration tube effecting a first limit of longitudinal travel of said

ferromagnetically responsive needle; and

a needle spring urging said ferromagnetically responsive needle away from said  
spring calibration tube;

said spring calibration tube and said needle spring enclosed within said housing and  
removable and replaceable through said field removable and replaceable closure.

4. (original) The fuel injector having field replaceable components of claim 1, further comprising:

a longitudinally extensive valve seat location tube having a first end and a second

end longitudinally distal to said first end, said first end capturing said valve seat adjacent said housing and further having a longitudinally extensive internal needle passage; and

a valve seat lock mechanically engaging said housing and capturing said longitudinally extensive valve seat location tube therein.

5. (original) The fuel injector having field replaceable components of claim 1, further comprising a fuel tube defining said fuel inlet and passing at least partially through said electrical actuating coil.
6. (canceled)
7. (canceled)
8. (original) The fuel injector having field replaceable components of claim 1, further comprising a needle guide nested removably within said valve seat.
9. (original) The fuel injector having field replaceable components of claim 1, wherein said flow disk further comprises a sheet material having fuel flow passages formed therethrough.

10. (original) The fuel injector having field replaceable components of claim 4, wherein said valve seat location tube further comprises longitudinal fuel flow passages terminating adjacent said valve seat, said longitudinal fuel flow passages separate from said longitudinally extensive internal needle passage.
11. (currently amended) The fuel injector having field replaceable components of claim 1 where ~~each of said field replaceable components is manufactured to allow visual identification of said field replaceable component's critical characteristic~~ comprise at least one of said ferromagnetically responsive needle, said valve seat, and said flow disk.
12. (currently amended) A method for adjusting at least one fuel injector for internal combustion engine operation in an internal combustion engine having a plurality of fuel injectors, comprising the steps of:
  - assembling said at least one fuel injector comprising field replaceable performance
  - 5                   altering components wherein the degree of performance alteration is not
  - visually discernable from the physical geometry of said field replaceable
  - performance altering components;
  - providing a at least one substitute for at least one of said field replaceable
  - performance altering components in a performance altering geometry having
  - 10                   critical characteristics sufficiently matched to said at least one of said field

replaceable performance altering components to enhance said internal combustion operation by replacement of one of said alternate configurations with another of said alternate configurations;

selecting said at least one substitute based upon visual indicia which uniquely  
15 identify a grouping of performance altering characteristics which are different  
from said at least one of said field replaceable performance altering  
components, such that replacement of said at least one of said field  
replaceable performance altering components with said substitute will result  
in a desired performance alteration;

20 modifying said fuel injector fuel dispensing characteristics by replacing said at least one of said field replaceable performance altering components with said substitute.

13. (original) The method for adjusting a fuel injector for internal combustion engine operation of claim 12, wherein said step of modifying further comprises exchanging said at least one of said field replaceable performance altering components with said substitute in all of said plurality of fuel injectors.

14. (canceled)

15. (original) The method for adjusting a fuel injector for internal combustion engine operation of claim 12, wherein said step of modifying further comprises modifying a fuel injection fuel outlet opening.
16. (original) The method for adjusting a fuel injector for internal combustion engine operation of claim 12, wherein said step of modifying further comprises modifying a fuel injection spray flow rate versus time profile during each injection cycle.
17. (original) The method for adjusting a fuel injector for internal combustion engine operation of claim 12, wherein said step of modifying further comprises modifying a fuel injection response to electrical control.
18. (original) The method for adjusting a fuel injector for internal combustion engine operation of claim 12, wherein said step of modifying further comprises modifying a fuel injector needle closing spring force.
19. (Canceled)
20. (Canceled)

21. (New) The method for adjusting a fuel injector for internal combustion engine operation of claim 12, wherein said step of selecting said at least one substitute comprises selecting at least one of said ferromagnetically responsive needle, said valve seat, and said flow disk.
22. (New) A fuel injector having field replaceable components exchangeable to change at least one of said fuel injector's characteristics, said fuel injector comprising:
- an electrical power connector adapted to receive a fuel injector energization signal;
  - an electrical actuating coil electrically coupled to said electrical power connector and powered by said fuel injector energization signal to controllably produce a magnetic field;
  - a ferromagnetically responsive needle movable responsive to variations in said magnetic field;
  - a valve seat having a fuel passage therethrough, said fuel passage selectively closed or opened by said movement of said ferromagnetically responsive needle;
  - a fuel inlet for receiving fuel into said fuel passage;
  - a flow disk receiving fuel from said fuel passage and dispersing said fuel within an internal combustion engine;
  - a housing enclosing said electrical actuating coil, said ferromagnetically responsive needle, said valve seat, and said flow disk, said housing having a fuel inlet and a fuel outlet and further having a field removable and replaceable closure

which provides field access to and replacement of said field replaceable components and thereby change at least one of said fuel injector's characteristics;

a longitudinally extensive valve seat location tube having a first end and a second end longitudinally distal to said first end, said first end capturing said valve seat adjacent said housing and further having a longitudinally extensive internal needle passage and longitudinal fuel flow passages terminating adjacent said valve seat, said longitudinal fuel flow passages separate from, parallel to and adjacent to said longitudinally extensive internal needle passage; and

a valve seat lock mechanically engaging said housing and capturing said longitudinally extensive valve seat location tube therein.